REMARKS

This Amendment is responsive to the Office Action identified above, and is responsive in any other manner indicated below.

PENDING CLAIMS

Claims 1-12 were pending, under consideration and subjected to examination in the Office Action. Unrelated to any rejection, appropriate claims have been amended and/or added in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment and are simply refocused claims in which Applicant is presently interested. At entry of this paper, Claims 2-8 and 10-14 will be pending for further consideration and examination in the application.

REJECTION UNDER 35 USC §103 - OBVIATED VIA CLAIM AMENDMENT

The 35 USC §103 rejection of Claims 1-12 as being obvious over Sandifer (US 5,987,474 A) is respectfully traversed. Such rejection has been rendered obsolete by the present clarifying amendments to Applicant's claims, and accordingly, traversal arguments are not appropriate at this time. However, Applicant respectfully submits the following to preclude renewal of any such rejections against Applicant's clarified claims.

All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated herein by

reference. Further, all Office Action statements regarding the prior art rejections or, statements alleging purpose or opinion of amendments made herein, are respectfully traversed. As additional arguments, Applicant respectfully submits the following.

In the recent decision in *In re Lee*, 61 USPQ2d 1430 (Fed. Cir. 2002), the Court, in reversing an obviousness rejection, indicated that deficiencies of the cited reference cannot be remedied with conclusions about what is "basic knowledge" or "common knowledge." The Court pointed out:

> The Examiner's conclusory statements that "the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software" and that "another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial" do not adequately address the issue of motivation to combine. This factual question of motivation is immaterial to patentability, and could not be resolved on subjected belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of reference, simply to "[use] that which the Inventor taught against its teacher."...Thus, the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion. (emphasis added)

Thus, what a reference teaches is a question of fact. *In re Baird*, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994) (*citing In re Beattie*, 974 F.2d 1309, 1311, 24 USPQ2d 1040, 1041 (Fed. Cir. 1992). (*In re Baird* addresses the substitution of a claim limitation by an element that is alleged to be the same or to operate the same; "the requirements of the claim cannot be ignored or substituted.")

Accordingly, in order to properly support a §103 obviousness-type rejection, the reference not only must suggest the claimed features, but also must contain the motivation for modifying the art to arrive at an approximation of the claimed features.

Sandifer neither teaches nor suggests the claimed features, and likewise does not contain motivation for modifying to arrive at an approximation of the claimed features. More particularly, Sandifer is directed to a computer-aided maintenance and repair information system mainly for aircraft maintenance, *i.e.*, Sandifer **NOWHERE** explicitly mentions elevators.

Office Action comments, in turn, argue that since Sandifer relates in general to maintenance and repair of equipment, and since elevators are maintained equipment, that Sandifer is relevant prior art. Even assuming *arguendo* that such is true, Sandifer still continues to fail as a reference in that Sandifer is not at all concerned with helping select a **termed commercial** maintenance contract, and especially not a **termed commercial** maintenance contract of an elevator. More particularly, at best, Sandifer is basically an electronic notebook arrangement for record keeping. While Sandifer's arrangement may keep records of some repair or maintenance items, Sandifer's arrangement is not at all concerned with a commercial contract, and especially not with helping select a specific commercial contract.

Further, since Sandifer is not at all concerned with elevators, Sandifer does not at all disclose or suggest numerous ones of Applicant's claimed features/limitations. More particularly, Applicant's disclosed and claimed invention is directed to arrangements allowing determination (based upon input data and historical (*e.g.*, average) data) of a plurality of available termed commercial maintenance contractual plans for elevators, and customer selection of a desired maintenance contractual plan. That is, data is obtained/entered regarding a

customer's elevator, load predictions are made based upon average data for similar elevators/locations, a plurality of maintenance contractual plans are determined/offered, and the customer then selects a desired contractual plan.

Regarding distinguishing claim features, independent Claim 2, for example, contains the features/limitations: **load predicting means** for calculating a predicted load of said **elevator** from a specification of said elevator and a condition of a building in which said elevator is installed, said elevator being an object of maintenance, said condition of said building including at least one of a location of said building, a floor area, and a height of said building, said load predicting means including: a **data base** used to predict the load, wherein data in said data base for load prediction including conditions of existing buildings and an average number of users taken as a case with respect to each building meeting respective ones of said conditions of said existing buildings; wherein said load predicting means obtaining a predicted number of users of said building from said data base for load prediction by finding a condition of said existing buildings that matches said condition of said building, wherein said load predicting means computes a predicted load of said elevator from said predicted number of users of said building and said specification of said elevator; **maintenance plan setup means** for setting up a plurality of **termed commercial maintenance contractual plans**, each said termed commercial maintenance contractual plan including at least one of component part replacement intervals, check-up intervals and clean-up intervals of said elevator, said maintenance plan setup means including: a data base for maintenance plan computation, wherein data in said data base including a set of average replacement

intervals or clean-up intervals, and standard deviation of each one of component parts for respective loads of existing elevators; wherein said maintenance plan setup means obtaining a set of replacement intervals or clean-up intervals and standard deviation of each of said component parts for an elevator load that matches said predicted load; said maintenance plan setup means calculating one of said plurality of termed commercial maintenance contractual plans from said obtained set, each set having a different total failure occurrence probability; and **maintenance plan selecting means** for allowing a customer to select a desired termed commercial maintenance contractual plan from said plurality of termed commercial maintenance contractual plans. Other claims have such feature/limitations by dependency, or have similar or analogous features/limitations.

Sandifer, in contrast, is directed to a computer-aided maintenance and repair information system (*i.e.*, electronic notebook) for equipment. That is, Sandifer's arrangement simply allows a user to access repair manuals/information, and allows a user to store information on repairs made (*i.e.*, a repair log). Nowhere does Sandifer's disclosure mention determination or selection of a termed commercial maintenance contractual plan, or disclose mention of elevators. Even if Sandifer's disclosure was applied to the world of elevators, such still would not disclose or suggest determination or selection of a termed commercial maintenance **contractual** plan. That is, at best, Sandifer's teachings would teach use of Sandifer's electronic notebook (*i.e.*, log) and reference books within the elevator art.

In short, jumping from Sandifer's teachings to Applicant's invention would require a first logical leap from aircraft maintenance-notebook teachings to elevators,

require an additional logical leap to an arrangement for helping select a termed commercial maintenance contractual plan, and require yet a further logical leap to elevator-related databases, etc. There is absolutely no motivation or suggestion within Sandifer for making such logical leaps. Instead, it is respectfully submitted that the only suggestion or motivation to modify comes from the Examiner's improper use of Applicant's own teachings as a template to attempt to hindsight modify the reference. Such is improper, and is inadequate to support a §103 obviousness-type rejection.

In addition, numerous portions of the Office Action continue to take judicial notice of items to support the rejection, *e.g.*, that engineers calculate elevator loads in the building of the Empire State building. As a first rebuttal, calculating elevator loads to construct a building is completely different from calculating elevator loads for helping select a termed commercial maintenance contractual plan. As a second rebuttal, with regard to every assertion of apparent judicial (*i.e.*, Examiner) notice of common knowledge or well-known prior art, attention is directed to MPEP §2144.03 which states, **"If the applicant traverses such an assertion the examiner should cite a reference in support of his or her position."** Accordingly, in view of Applicant's traversal in this regard, and in accordance with the provisions of MPEP §2144.03, **Applicant respectfully requests that a documentary proof be cited to explicitly show that any alleged features were explicitly well-known in the art, or alternatively, Applicant respectfully requests withdrawal of all rejections based upon such unsupported judicial notice.**

In addition to the foregoing, the following additional remarks from Applicant's foreign representative also are submitted in support of traversal of the rejection and patentability of Applicant's claims.

Amongst various other features such as automatic generation of predicted load (use frequency) of the to-be-maintained elevator, the present invention features that a plurality of candidate maintenance contractual plans commensurate with predicted loads are automatically computed from information on the building and elevator of the customer, allowing the customer to choose a desired one, which is a significant difference not taught by Sandifer nor known in the art. It is respectfully submitted that Applicant's clarified claims quite clearly define the invention.

More specifically, the system of claim 2 is arranged such that the maintenance plan setup means (14, 15 in Fig. 2) for setting up a plurality of maintenance contractual plans includes a database (15) for maintenance plan computation, wherein data in the database (15) includes a set of an average replacement interval or clean-up interval and a standard deviation of each component part for respective loads of the existing elevators (see Fig. 16, wherein the standard deviation of each component part A, B and C is given in parentheses). By virtue of such data in the data base (15), a plurality of maintenance contractual plans, each having a different total failure occurrence probability, can be automatically calculated and presented to the customer, to allowi the customer to select a desired, customized one.

Sandifer shows a system which allows a system to access various documents, such as maintenance manuals, repair manuals, regulatory requirements,

etc., published by various publishers, including manufactures of to-be-maintained or repaired aircraft, and governmental agencies (see Col. 1). The system further has a data inputting tool for creating a maintenance record (logbook) which is necessary when conducting maintenance operations. Thus, Sandifer's system has the functionality of retrieving and displaying information that has been recorded on the system and information inputted by the user. However, unlike the present invention, Sandifer's system has no functionality of automatically generating a plurality of maintenance plans, each having a different total failure occurrence probability tailored to meet the building and elevator of a particular customer, and presenting such to the customer so as to allow it to choose a desired one. This is not taught by Sandifer, and is not known in the art.

Turning to the Office Action, the Examiner first contends at paragraph 3 on page 2 that the "(Title)" of Sandifer is "a support system for maintenance contract of regulated equipment." Such is wrong, in that the correct title of "computer aided maintenance and repair information system for equipment subject to regulatory compliance" does not include the word "contract."

Next, Office Action comments contend that Tables in Cols. 78-84 show "...selecting the interval between replacement of parts..., which varying intervals would be a plurality of plans as each plan would require a different interval." Applicant respectfully strongly traverses such an allegation, in that some components are seen to be listed in only the table named "Category and Component Type" in Cols. 83 and 84, and without any replacement or check-up interval or any standard deviation, as claimed in the present application

Furthermore, Office Action comments also contend as "Official Notice" that "calculating a load on any equipment to be installed is well known in the art," and goes on to discuss support for Official Notice in the paragraph bridging pages 2 and 3 of the Action. Even presuming *arguendo* that such contention is presumed to be correct, Applicant respectfully submits that the claimed invention is not obvious from Sandifer because Sandifer is irrelevant to Applicant's invention. Sandifer fails to teach or suggest the maintenance plan setup means for setting up a plurality of maintenance contractual plans which includes a data base for maintenance plan computation, wherein data in the data base includes a set of replacement intervals or clean-up intervals and in particular a standard deviation of each component part for respective load of the existing elevators. Clearly, the teachings of Sandifer and the Official Notice considered together cannot provide a plurality of maintenance contractual plans each having a different total failure occurrence probability.

The Examiner contends that Claim 3 is taught by the Tables in Cols. 79-81 pf Sandifer. Applicant respectfully disagrees. In fact, Sandifer's Claim 8 says, which refers to the "Logbook tables," recites that an electronic logbook functions to identify maintenance required by the publications, record compliance with the required maintenance, collect inspection and sign-off information and track any history of problems with the equipment and procedures to resolve the problem. Obviously, the data in the logbook is directed to obtaining information on maintenance required by the related publications and compliance record (as a preparation for later official inspection, for example). In contrast, the maintenance plan setup means of Applicant's invention is to obtain a set of replacement intervals or clean-up intervals

and standard deviation of each of the component parts of the customer' s elevator as a basis for calculating a plurality of termed commercial maintenance contractual plans each having a different total failure occurrence probability.

New Claims 13 and 14 also clearly define the "automatic" aspect of Applicant's invention. Thus, the present invention distinguishes over, and is allowable over, the applied art and Official Notice.

The following additional remarks from Applicant's inventors are submitted in support of traversal of the rejection and patentability of Applicant's claims.

Regarding differences in functionality, while both our invention and Sandifer are directed to systems for use for regulated equipment, the functions disclosed by our invention and Sandifer are completely different. The functionalities disclosed by Sandifer is to efficiently access documents that are required for maintenance work and to electronically create a compliance record of the maintenance work. In contrast, the functions of our invention are to automatically predict the load (use frequency) of a load to be maintained and automatically create a termed commercial maintenance plan contract suitable to the predicted load. Even if the object to be maintained may be same, since the functions provided are completely different, we believe our invention is not disclosed or suggested by Sandifer.

Further, the method of load prediction is not known in the art. When installing an elevator in a building, the capacity and running speed are selected based on the knowledge obtained by the designer' s experience and in accordance with local building code standards. The problem here is the fact that similar elevators of similar buildings selected in such a way are still quite different in actual use frequency. For

example, a certain elevator may make a round trip several tens of times per day, whereas a similar elevator at a differing location may make only several round trips. As another example, a certain elevator car may stop and open/close its door on every floor, while other elevator cars may stop only at the uppermost floor and the lowermost floor. Like these cases, the use frequency and usage of an elevator are determined based not only on the size of the building but also on other various factors, such as the usage of the building (*e.g.* apartment or office building), the location of the building (the type of the area of the building, *e.g.*, an area of a big city near a train station or a suburban city with only a couple of shops, etc.) and/or the usage of each floor of the building. Due to such variables, load prediction was difficult to do before the present invention.

In contrast, using a large amount of case data regarding existing elevators, the present invention makes it possible to provide a means for predicting the usage and use frequency of a newly installed elevator. More specifically, the present invention classifies existing buildings based on such attributes as the size, usage (the way they are used), location conditions (*e.g.*, at what kind of areas the buildings are located, such as whether it is located in a downtown area, at a place with lots of traffic, at a location near a train station or the like, see page 18, line 10 *et seq.*), and the specifications of the existing buildings. The load (*i.e.*, use frequency, the way the elevator is used and so on) of a classification to which a new elevator fits is used as a predicted load of the new elevator (see page 16, line 22 to page 30, line 19). In doing so, if particular attribute values *per se*, such as particular building size, way of use, location, elevator specification of the building, etc. are used, a problem may

arise that the new elevator falls into no classification. In view of such possibility, respective attributes (*e.g.* S, H, U) may be classified into several sub-classifications (S1-S3, H1-H3, U1-U3) (See Figs. 11A-11C), so that the fact that a particular attribute value falls in a particular one of the sub-classifications may be represented by the value of that particular sub-classification, as shown in Figs. 11A-11C. In Fig. 11A, for example, the site area is classified into three sub-classifications which are given classification values S1, S2 and S3, respectively, where S1 is directed to site area less than 500 m^2, S2 to the range of from 500 to less than 1000, and S3 directed to the range from 1000 to less than 1500 m^2. A particular site area is classified into one of the classifications and represented by the classification value of that one classification. Likewise, as to the building location conditions, the areas having a similar location condition are assigned a same classification symbol so that said areas are represented by the classification symbol, as shown in Fig. 10. For example, in Fig. 10 the areas 104, 105 and 106, which are all downtowns of medium scale cities, are assigned the same classification symbol A2.

Regarding the maintenance plan generation method of the present invention, heretofore, even if an elevator load could be determined, it was difficult to automatically generate an appropriate maintenance plan which was commensurate with the load. Take elevator door open/close units, for example. Although they are designed to satisfy a predetermined durability, it is often the case that they break down only after a long time has passed since a designed time. Heretofore, maintenance has often been performed with an excessive margin with respect to the practical durability of parts.

In contrast, the present invention provides a means for generating an appropriate maintenance plan commensurate with the elevator load by using a vast amount of case data on existing elevators based on a similar idea as the load prediction, *i.e.*, see page 30, line 20-page 43, line 20 for detailed description of the practical implementation.

Regarding operation via the Internet, to practically operate Applicant's support system for helping select a maintenance contract of an elevator via the Internet, it is important that the elevator load prediction and generation of a maintenance plan be made automatically. While connecting Applicant' s system with the Internet is advantageous in that the service can be equally provided to customers all over the world, it also means that the Applicant's system has to handle a vast number of accesses from all over the world. If the load prediction and generation of the maintenance plan are performed via human operator intervention, it would be increasingly difficult to quickly handle the vast amount of accesses from customers, making the support system quite difficult to operate or handle. Therefore, it is clear that connecting the maintenance contract support system to the Internet is made possible via automatic load prediction and automatic generation of maintenance plans according to the present invention.

In conclusion, as has been discussed, the method of load prediction and maintenance plan generation according to the present invention are to automatically calculate the elevator load and commensurate maintenance plan from information on the building and elevator of the customer, and are not suggested or taught by Sandifer or the knowledge of known load prediction method.

As a result of all of the foregoing, it is respectfully submitted that the applied art (taken alone and in any of the Office Action suggested combinations) would not support a §103 obviousness-type rejection of Applicant's claims. Accordingly, reconsideration and withdrawal of such §103 rejection, and express written allowance of all of the §103 rejected claims, are respectfully requested.

EXAMINER INVITED TO TELEPHONE

The Examiner is invited to telephone the undersigned at the local D.C. area number of 703-312-6600, to discuss an Examiner's Amendments or other suggested action for accelerating prosecution and moving the present application to allowance.

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present application are without prejudice or disclaimer. That is, any above statements, or any present amendment or cancellation of claims (all made without prejudice or disclaimer), should not be taken as an indication or admission that any objection/rejection was valid, or as a disclaimer of any scope or subject matter. Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, *i.e.*, Applicant continues (indefinitely) to

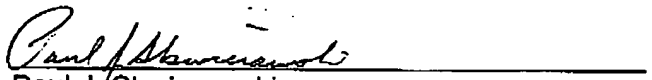
maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are now in condition for allowance. Accordingly, early allowance of such claims is respectfully requested.

This Amendment is being submitted within the shortened statutory period for response set by the Office Action mailed 12 January 2005, and therefore, no Petition or extension fee is necessary for entry of this paper. To whatever other extent is actually required and appropriate, Applicant respectfully petitions for an extension of time under 37 CFR §1.136. Further, no additional claim fee is required for entry of this paper. Please charge any actual deficiency in fees due to ATSK Deposit Account No. 01-2135 (as Case No. 500.39831X00).

Respectfully submitted,



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